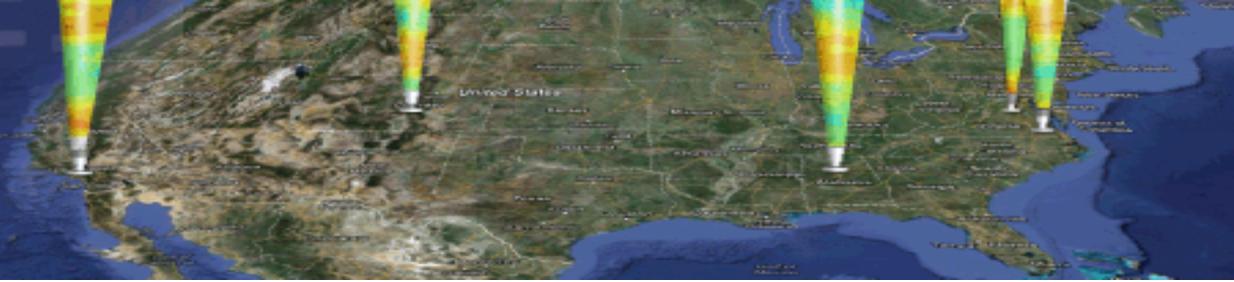


*Tropospheric Ozone LIDAR Network*

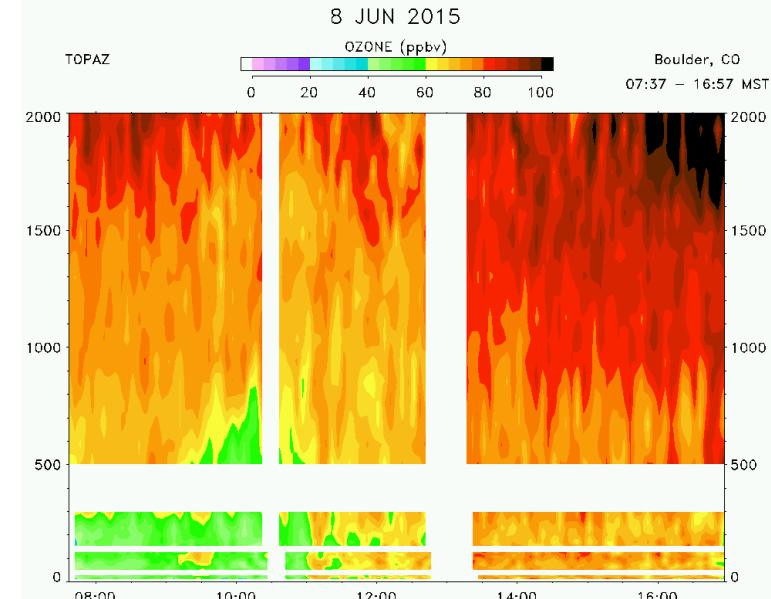
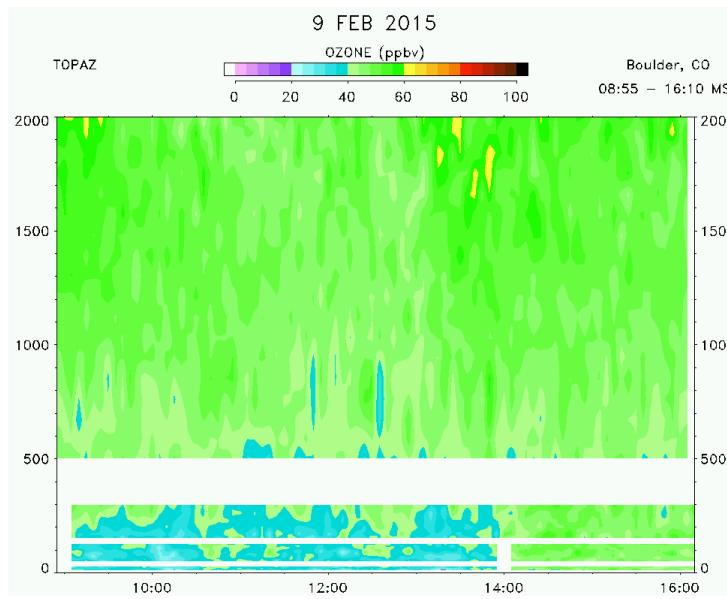
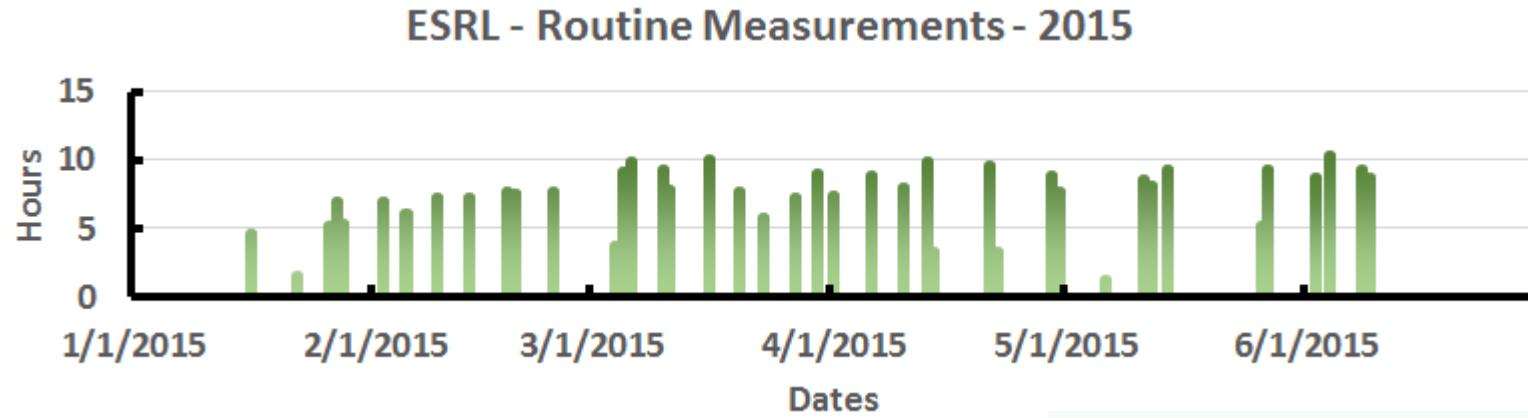


# ESRL –Station report

## *TOLNET meeting – Boulder 2015*

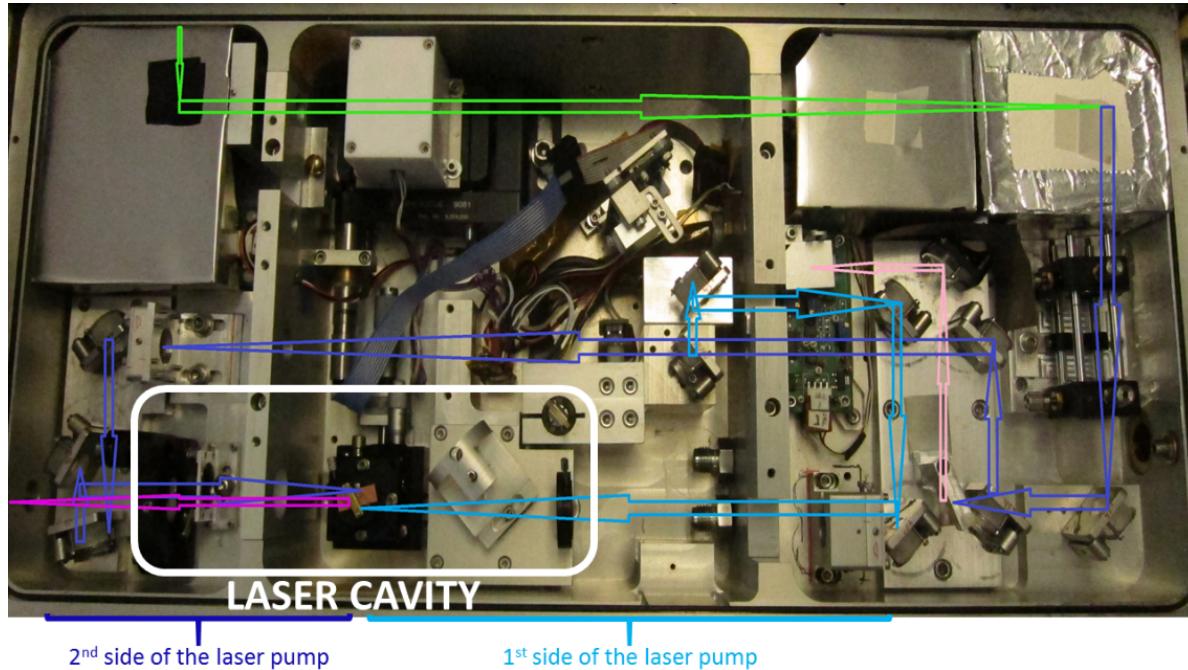
# 2015 Routine Measurements

- Since January 2015  $\approx$  300 hours of measurements
- Deployed at the BAO in April in support of the SONGNEX experiment ( $\approx$  70 hours)



# TOPAZ updates

- Re-organized the beam path to avoid/limit optics damaged
- Replaced two of CLBO's heaters that burned out.
- Currently testing/operating the system to see if the changes are helping long-term
- Unsuccessful attempt of CLBO replacement (damaged possibly induced by moisture even when stored with desiccant)



# 2015 Prospects

- ESRL R0 TOLNET format
- Influence of the choice of the temperature profile on ozone analysis
- Licel update and system conversion (summer 2015)
- Summer 2015:
  - Testing of the new system
  - Deployment at BAO
- $\approx 500$  hours of routine measurements

TOLNet-03Lidar\_ESRL\_20150128\_R0 - Notepad

```
File Edit Format View Help
18 : NUMBER OF GENERAL HEADER LINES (AFTER THIS LINE)
v1.0 : TOLNET STANDARDIZED FORMAT VERSION FOR PROFILE DATA
65 : NUMBER OF PROFILES IN THIS FILE
14 : NUMBER OF DATA COLUMNS FOR ALL PROFILES
ALT, m, Altitude above sea level (center of sampling bin) : COLUMN 1
O3ND, molec.m-3, ozone Number Density (measured) : COLUMN 2
O3NDUncert, molec.m-3, Ozone Number Density Combined standard uncertainty : COLUMN 3
O3NDResol, m, Ozone Number Density standardized Vertical Resolution : COLUMN 4
Precision, %, Measurement Precision : COLUMN 5
ChRange, #, Channel Range (1.0 to N.0, nearest-field to farthest-field) : COLUMN 6
O3MR, ppbv, Ozone Mixing Ratio (derived) : COLUMN 7
O3MRUncert, ppbv, Ozone Mixing Ratio Combined Standard Uncertainty : COLUMN 8
Press, hPa, Air Pressure used to derive Ozone Mixing Ratio : COLUMN 9
PressUncert, hPa, Air Pressure standard Uncertainty : COLUMN 10
Temp, K, Air Temperature used to derive Ozone Mixing Ratio : COLUMN 11
TempUncert, K, Air Temperature Ratio standard Uncertainty : COLUMN 12
AirND, molec.m-3, Air Number Density used to derive ozone Mixing Ratio : COLUMN 13
AirNDUncert, molec.m-3, Air Number Density Standard Uncertainty : COLUMN 14
-9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999, -9999 ; MISSING DATA VALUES
5 : NUMBER OF GENERAL COMMENTS LINES (AFTER THIS LINE)
NOAA/ESRL TOPAZ Lidar : INSTRUMENT NAME
Christoph.Senff, NOAA/ESRL/CSD, christoph.senff@noaa.gov : PI AND CONTACT INFO
Boulder, CO : SITE NAME
-105.252, 40.0274, 1673.00 : SITE LONGITUDE, LATITUDE, ELEVATION (degE, degN, m)
R0 : DATA REVISION # (if value >0 then provide text below)
#BEGIN PROFILE ;-----
12 : NUMBER OF HEADER LINES IN THIS PROFILE'S HEADER (AFTER THIS LINE)
400 : NUMBER OF DATA LINES IN THIS PROFILE
2015-05-05, 18:31:39 : DATA PROCESSING DATE, TIME
Topazg v1.0 : DATA PROCESSING VERSION
NOMINAL : RESULTS QUALITY (NOMINAL, FAIR, POOR)
2015-01-28, 17:51:45 : PROFILE DATE, TIME (UT) START
2015-01-28, 17:56:45 : PROFILE DATE, TIME (UT) END
2015-01-28, 17:54:15 : PROFILE DATE, TIME (UT) MEAN
Standard Atmosphere : SOURCE OF A PRIORI Press, Temp, AirND USED TO DERIVE OZONE MIXING RATIO
2015-01-28, 17:51:45 : SOURCE DATE, TIME (UT)
-105.252, 40.0274, 1673.00 : SOURCE LONGITUDE, LATITUDE, ELEVATION (degE, degN, m)
; OPERATOR COMMENTS
ALT, O3ND, O3NDUncert, O3NDResol, Precision, ChRange, O3MR, O3MRUncert, Press, PressUncert, Temp, TempUncert, AirND, AirNDUncert
```